

REMARKS

The Applicants have carefully considered this application in connection with the Examiner's Action and respectfully request reconsideration of this application in view of the following remarks.

The Applicants originally submitted Claims 1-27. In response to a Restriction Requirement in the the Official Action of May 19, 2002, the Applicants elected, without traverse, to prosecute Claims 1-8, comprising Group I, and cancelled Group II (Claims 9-15) and Group III (Claims 16-27). In a preliminary amendment, the Applicants amended Claim 1 and canceled Claim 7 without prejudice or disclaimer. In response to the present Office Action new Claim 28 has been added. Support for Claim 28 may be found in paragraph [0025] of the Specification. Accordingly, Claims 1-6, 8 and 28 are currently pending.

I. Rejection of Claims 1-6 and 8 under 35 U.S.C. §103

The Examiner has rejected Claims 1- 6 and 8 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,117,000 to Anjur *et al.* ("Anjur") in view of U.S. Patent No. 6,390,890 to Molnar ("Molnar").

The Applicants respectfully maintain that the claimed invention is not obvious in view of the foregoing combined references, and that various combinations of these references fail to establish a *prima facie* case of obviousness for Claims 1-6 and 8.

The asserted combination of Anjur and Molnar, for instance, fail to teach or suggest all of the elements of the invention recited in independent Claim 1. As acknowledged by the Examiner, Anjur fails to teach or suggest a polishing body comprising a cross-linked polymer having a hardness ranging from about 34 Shore A to about 60 Shore A. The Examiner asserts that Molnar discloses

a polishing pad comprising a polishing pad having a shore A hardness and that one of ordinary skill would be motivated to modify Anjur's polishing pad to include a cross-linked polymer as taught by Molnar to enhance thermal resistance. The Examiner also asserts that it would be obvious to replace Anjur's polyurethane pad with a cross-linked polymer having a hardness within the range recited in Claim 1 because this merely involves using routine skill to discover an optimum or workable range.

The Applicants respectfully maintain that the combination of Anjur and Molnar fails to teach or suggest a cross-linked polymer having a hardness ranging from about 34 Shore A to about 60 Shore A.

As noted in the Applicant's declaration, filed with the present response under 37 C.F.R. §1.132 ("Obeng Declaration"), polyurethane-based polishing pads are well known to decompose during CMP. Consequently, the hardness of polyurethane-based polishing pads does not remain constant during polishing. It follows that Anjur's range of 55 Shore A to 98 Shore A, for newly made polyurethane-based polishing pads will bear little to no resemblance to the hardness of the pad during polishing.

Molnar's disclosure that certain components of his polishing pad could have a Shore A, with no range specified, does not remedy Anjur's deficient teachings of a cross-linked polymer having the recited range of hardness. The Applicants respectfully submit that a hardness designation of "Shore A" overlaps a broad range of other hardness scales, including Shore B, Shore C, Shore D, Shore O and Shore OO. Therefore, in contrast to Claim 1, Molnar merely gives a broad range of possible hardness values for cross-linked polymers. As such, the combination of Anjur in view of Molnar fails to teach or suggest a polishing body comprising a material that is a cross-linked polymer having a hardness ranging from about 34 Shore A to about 60 Shore A, as recited in Claim 1.

In addition to the arguments presented above concerning Claim 1, the Applicants also wish to note for the record that Anjur is directed a polishing pad having an open-celled porous substrate (Abstract). In contrast, Claim 3 recites that the cross-linked polymer of Claim 1 has a closed cell structure. Similarly, Claim 6 recites that the cross-linked polymer is a polyethylene having a closed cell structure. Moreover, Molnar provides no teaching or suggestion of the use of cross-linked polymer having a closed cell structure. Therefore the combination of Anjur in view of Molnar fails to teach or suggest the elements of Claims 3 and 6, as well as each element of Claim 1.

In addition, the asserted combination of Anjur in view of Molnar fails to establish a *prima facie* case of obviousness because the asserted combination is improper. The combination of Anjur and Molnar is improper because, in the absence of improper hindsight from the present invention, a person having ordinary skill in the art would not be motivated to add the teachings or suggestions of Molnar to Anjur. For instance, the use of a cross-linked polymer with enhanced thermal resistance could detrimentally affect Anjur's process for preparing polishing pads. Anjur uses a sintering process for forming polishing pads (Column 7, Lines 48-67), and there is no teaching or suggestion that crosslinked polyurethane particles could be sintered together according to Anjur's process. It follows, therefore, that one of ordinary skill in the art would not be motivated to modify Anjur's polishing pad and process of fabrication to include a cross-linked polymer as taught by Molnar.

In conclusion, because the asserted combination of Anjur in view of Molnar fails to teach or suggest all of the elements of Claim 1, and this combination is improper, a *prima facie* case of obviousness of Claim 1 or its dependent claims has not be established. The Applicant therefore respectfully the Examiner to withdrawn the rejections of Claims 1-6 and 8 under 35 U.S.C. §103(a).

II. Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a timely Notice of Allowance for Claims 1-6, 8 and 28.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,
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A handwritten signature in cursive script, appearing to read "Charles W. Gaines", written over a horizontal line.

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